

RECORDS OF BEES FROM THE SOLOMON ISLANDS
WITH DESCRIPTIONS OF NEW SUBSPECIES
(HYMENOPTERA, APOIDEA)

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Preliminary reports and descriptions of the bees of the Solomon Islands have been published by T. D. A. Cockerell, F. F. Kohl and E. Strand*. The present brief contribution is the result of working over a short series of bees in the U. S. National Museum collected during the recent war by G. E. Bohart, J. P. Burks, L. A. Conwell, W. G. Downs, J. G. Franclemont, A. B. Gurney and J. H. Paullus. It is now possible to give new island records for many of the species. The opportunity is also taken to describe two new island subspecies and the hitherto unknown male of *Nomada psilocera*. Identification of some of the species has been facilitated by reference to cotypes and specimens determined by Cockerell in the U. S. National Museum.

Nomia froggati Cockerell, 1911

♂♂; lower Florida Island; March 1945; (G. E. Bohart).

It has been recorded previously from Ruavutu, Guadalcanal and Hagalu, Nggela (Florida Island) by Cockerell (1926, 1936, 1939). Normally the males have orange-yellow bands at the apices of the first five tergites, but occasionally those on the first, fourth and fifth may be completely decolorized, and in one specimen are of a yellowish-green rather than orange.

*Cockerell, T. D. A., 1911. Proc. Linn. Soc. N. S. W. 36: 160-178.

———, 1926. Pan-Pac. Ent. 3: 82, 90.

———, 1929. Records Austral. Mus. 17: 228, 231, 232, 234.

———, 1936. Proc. Roy. Ent. Soc. London, pp. 225-6.

———, 1939. Occas. Papers B. P. Bishop Mus. 15: 134-6.

Kohl, F. F., 1908. Denkschr. Akad. Wiss. Wien 81: 308, pl. 3, fig. 16.

Strand, E., 1911. Wien. Ent. Ztg. 30: 79.

Halictus species

1 ♂; Bougainville; April 10, 1944; (W. G. Downs).

I am unable to place this specimen due to lack of material. This is a stocky specimen for a male which eliminates the introduced *dampieri* Ckll. as a possibility. The sculpture of the mesoscutum and dorsal surface of the propodeum eliminates respectively *viridiscitus* Ckll. and *froggatti* Ckll. from consideration. I would be inclined to place it as the male of *exterus* Ckll., of which I have a female determined by Cockerell, except that his brief notes (1939) on the supposed male of that species indicate a rather slender species. *H. subexterus* Ckll. and *lavoroensis* Ckll., both known only from females, are the other possibilities, unless this male represents an undescribed species. No *Halictus* has been recorded previously from Bougainville.

Lithurgus fortis Cockerell, 1929

7 ♀♀; Bougainville; March 26–29, 1944; (A. B. Gurney). 1 ♀; same data, but April 10, 1944; (W. G. Downs).

The species is known also from Lavoro Plantation and Kaukau on Guadalcanal, Banoni on Bougainville and Kiva Kiva on San Cristobal.

The specimens collected by Gurney were tunneling in the soft wood of a sapling used as a tent support. A bombyliid fly, *Anthrax* sp. (det. C. T. Greene), was taken hovering about the entrances to the tunnels.

Lithurgus fortis nigerrimus, new subspecies

This is the only bee I have from New Georgia, an island on which there seems to be a strong tendency toward the development of discrete subspecies. The present form is structurally identical with typical *fortis*, but lacks the red hair on front, vertex, temples and thorax. There are a few dark red hairs at apex of clypeus. The narrow apical bands on the tergites are dark in *nigerrimus*, pale in *fortis*, and the wings are very strongly infumated in the former, feebly so in the latter. The unique female type of *nigerrimus* is 13.0 mm. long.

Type: ♀; Munda, New Georgia; 1944; (L. A. Conwell) [U. S. National Museum, Type No. 59,042]

Megachile lachesis Smith, 1860

1 ♀; Tenaru, Guadalcanal; 1944; (G. E. Bohart). 3 ♀♀; lower

Florida Island; March 1945; (G. E. Bohart). 2 ♀♀; Bougainville; July 17–September 1944; (A. B. Gurney).

It has been recorded previously from Tulagi Island, Suva on Malaita and Suva on Bougainville.

Megachile mendanae Cockerell, 1911

2 ♀♀; lower Florida Island; March 1945; (G. E. Bohart).

The only definite locality record previous to this is Guadalcanal. Cockerell (1939) described the supposed male from Huugku, Bougainville—females have not been collected there as yet.

Megachile bougainvilliana Strand, 1911

Megachile bougainvilliana Strand, 1911 (March 20th). Wien. Ent. Ztg. 30: 79; [♀; Numa Numa, Bougainville; type in Berlin Mus.].

Megachile ferricincta Cockerell, 1939. Occas. Papers B. P. Bishop Mus. 15: 136; [♀; Guadalcanal; type in Bishop Museum, Honolulu]. NEW SYNONYMY.

Although I have not seen the types, I think there can be no question as to the correctness of the synonymy proposed above. Both authors mention the striking ferruginous bands on the abdomen and the bituberculate apical margin of the clypeus. Cockerell's *bougainvillei* (May 31, 1911, p. 171), named for the explorer not the island, may well be the male.

9 ♀♀; lower Florida Island; March 1945; (G. E. Bohart).

Megachile shortlandi aurantiscopea, new subspecies

Cockerell (1911) described *shortlandi*, naming it for the explorer not the island, from the Solomon Islands, and later (1936) recorded it from Guadalcanal. The *scopea* in typical *shortlandi* is said to be pale fulvous on the second sternite, bright red on the third and fourth, black on sides, and black on the fifth and sixth. A female from Lunga, Guadalcanal determined as *shortlandi* by Cockerell has the *scopea* as above except that the red is somewhat faded. The atypical subspecies *aurantiscopea* agrees in structural details with the specimen determined by Cockerell, but has the entire *scopea* bright orange except for the pale fulvous on the second sternite. The unique female type of *aurantiscopea* is 13.3 mm. long.

Type: ♀; Treasury Island; July 30, 1944; (J. H. Paullus). [U. S. National Museum, Type No. 59,043].

Coelioxys dispersa Cockerell, 1911

1 ♂; Tenaru River, Guadalcanal; 1944; (G. E. Bohart).

It was described originally from the Solomon Islands and Cockerell later (1936) recorded it from Lunga, Guadalcanal.

Nomada psilocera Kohl, 1908

Thus far the species has been known only from the unique female type from Bougainville. A single male from lower Florida Island, March 1945, (G. E. Bohart) before me may be described as follows.

Length 7.2 mm., forewing 4.6 mm. Black, with extensive ferruginous markings as follows: Mandible, labrum, clypeus, front below antennae, narrow lines along inner and posterior eye margins, scape beneath, flagellum entirely, side of pronotum, mesonotum except for a broad central band and a pair of shorter, narrower ones along parapsidal furrows, edges of scutellum, post-scutellum, upper two-thirds of mesopleuron, legs, apices of first to fifth tergites, sixth and seventh tergites and all sternites; second and sixth tergites with a small lateral creamy spot; scutellum except edges and narrow band on outer surface of fore tibia, yellow.

Mandibles not toothed within near apex, flagellar segments unmodified, slightly longer than broad, the flagellum gradually widening toward last segment but hardly clavate, the comparative lengths of first three flagellar segments about 3:2:2; punctuation apparently very similar to female, that is, head and thorax coarsely and closely so except mesoscutum and scutellum where it is much sparser, abdomen with very minute sparse ones, the triangular area of propodeum wrinkled; fore coxa not spined at apex; pygidium with apex narrowly notched in middle.

Anthophora sapiens Cockerell, 1911

2 ♀♀; Tenaru, Guadalcanal; October 14, 1943; (J. G. Franclemont). 1 ♂; same data, but 1944; (G. E. Bohart). 1 ♂; lower Florida Island; March 1945; (G. E. Bohart). 2 ♂♂; Treasury Island; July 30, 1944; (J. H. Paullus).

The present species is extremely close in general appearance to what Cockerell identified as *vigilans* Smith from New Guinea. The two species are quite easily distinguished by characters of the last sternites and genitalia of the males. The seventh sternite of *sapiens* has a Y-shaped area of close-set, heavy thorns in the middle on the apical third, the stem of the Y toward the apex of the segment. This sternite in *vigilans* has a very broad, rounded area of much finer thorns. The incurved apex of the gonoforceps in *sapiens* is setose beneath on the apical half only, but entirely setose in *vigilans*. I have found no variation in these characters in the few specimens examined.

Externally the two species are separated only by minute differences in maculations and pattern of the pubescence. In females of *sapiens* the stem and arms of the inverted T on the clypeus are narrower, the supraclypeal mark about half the basal width of clypeus, the scape is dark beneath, the apical bands of pubescence on the tergites are narrower, that of the second being only one-fourth the length of exposed part of tergite, and the apical fringes of the third and fourth sternites are fuscous except for some yellowish at sides; in *vigilans* females the stem and arms of the T are broader, the supraclypeal mark almost as wide as basal width of clypeus, scape with a yellow mark beneath, the apical bands of pubescence on tergites are broader, that of the second being at least one-third the length of exposed part of tergite, and the apical fringes of third and fourth sternites light brown in middle, yellowish on sides. The males of the two are separated by the same differences as the females with regard to the relative width of bands on the tergites, and the color of the apical fringes of the third and fourth sternites.

Cockerell described *sapiens* from the Solomon Islands and recorded it later (1929, 1939) from Lavoro Plantation, Guadalcanal.

***Thyreus gemmatus* (Cockerell), new combination**

Crocisa gemmata Cockerell, 1911. Proc. Linn. Soc. N. S. W. 36: 166; [♀, ♂; Solomon Islands].

1 ♂; Tenaru, Guadalcanal; October 25, 1943 (J. G. Franclemont). 3 ♂♂; same data, but 1944; (G. E. Bohart). 2 ♀♀; Solomons; (J. P. Burks). 1 ♀; lower Florida Island; March 1945; (G. E. Bohart).

Described originally from the Solomon Islands, and recorded later by Cockerell (1926, 1929, 1936, 1939) from Tulagi Island, Lunga and Lavoro Plantation on Guadalcanal, and Buoi, Buka Passage and Suvai on Bougainville. The present species is close to what I identify as *quartinae* (Gribodo) from New Guinea, but is distinguished by the widely separated spots on the first abdominal tergite and differences in the male genitalia.

***Trigona sapiens* Cockerell, 1911**

1 ♀; lower Florida Island; March 1945; (G. E. Bohart).

It was described originally from Solomon Islands and recorded later (1929, 1936, 1939) by Cockerell from New Georgia, Halaita on Nggela (Florida Island) and Lavoro Plantation on Guadalcanal.